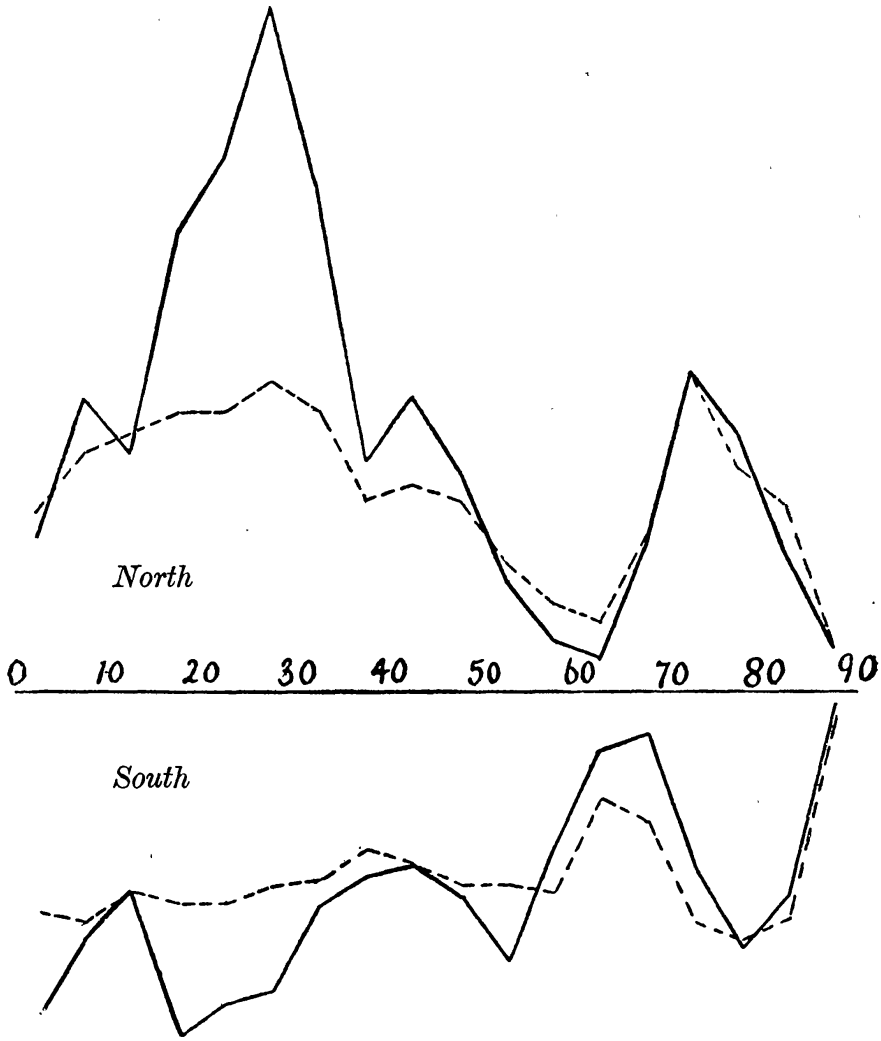
Distribution of Prominences in Latitude in the Year 1906, *from observations made at Kodaikánal on* 156 *days in the first half of the year, and* 105 *days in the second half.* By J. Evershed.

The distribution of prominences in latitude for each half of the year 1906 is represented in the diagrams by two curves. The



Distribution of prominences in latitude—1906 January 1 to June 30.
Broken line = mean numbers
Continuous line = mean activity
} for each 5 degrees.

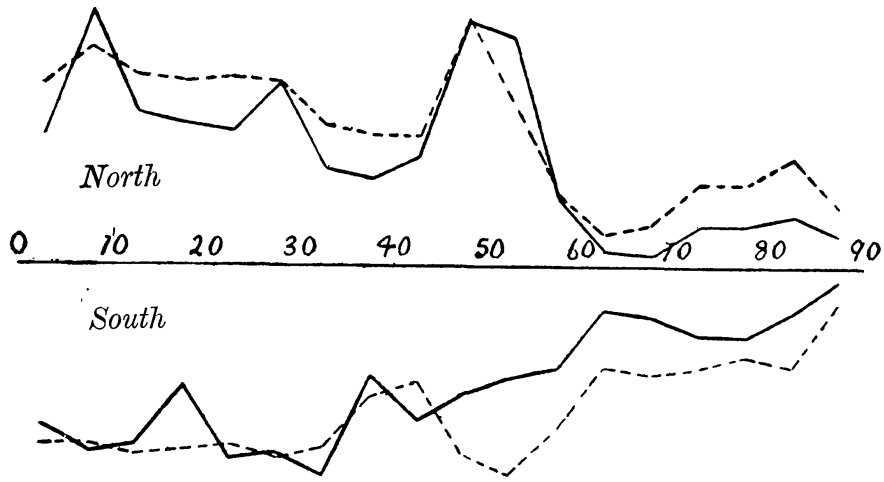
broken line gives the mean numbers of prominences observed in each zone of 5° from the equator to the poles. The continuous line gives the mean "activity" for the same zones. The activity is obtained by taking account of the height and extent of each prominence, the unit adopted being a prominence of 1° in extent and 10″ in height.

The average size of the prominences in each zone is indicated by the difference of the ordinates of the two curves: thus, at latitudes where the continuous line rises above the broken line in the northern hemisphere (or falls below it in the southern), the prominences were larger than the average for the whole year, and at the crossing points they were of average size.

General Remarks.

The distribution curve for the first half of the year has the same form as that of the previous year, with a maximum in the zone 25°–30°, and a well-defined zone of activity in high latitudes.

On both sides of the equator there is a very pronounced minimum of activity in the zones 55°–65°.



Distribution of prominences in latitude—1906 July 1 to December 31.
Broken line = mean numbers
Continuous line = mean activity
} for each 5 degrees.

About the end of June a considerable change took place in the distribution, and in the second half of the year the curve takes a very different form. There is also a great falling off in activity in both hemispheres.

The year as a whole is interesting, as showing the culminating point in the prominence period, when the high-latitude zones of activity finally envelope the poles. This took place last at about the epoch 1894·7. At that time, as in the past year, the zones of maximum activity were at latitudes 25°–30° on both sides of the equator, and during the past 12 years these regions of greatest activity have been slowly advancing towards the poles. In the years 1896 to 1901 they remained practically stationary between 45° and 55°, but since that date the advance polewards has been at the average rate of 5° per annum. New maxima appeared

between latitudes 20° and 30° in 1902, and the shifting of the old maxima towards the poles appears to be correlated with the development of these.

An interesting feature in these high-latitude prominences is the narrow limits of latitude within which at any one time the zone is defined, and the tendency to form extended chains of prominences all approximately in the same latitude, but often exceeding 100° in longitude. When this occurs one may get an apparently stationary prominence, remaining at the same position angle for 10 or 14 days, after which it appears on the opposite side of the pole for another series of days.

Observations of Jupiter's Sixth and Seventh Satellites from Photographs taken with the 30-inch Reflector at the Royal Observatory, Greenwich, in 1906–7.

(*Communicated by the Astronomer Royal.*)

The Sixth and Seventh satellites of Jupiter have been under observation at Greenwich from 1906 August 28 to 1907 April 6, and photographs have been taken at every available opportunity. In all, 55 photographs of J. VI. have been obtained on 28 nights, the observations extending over a period of 222 days, and 12 photographs of J. VII. on 7 nights extending over a period of 87 days. All these have been measured and reduced and the results are given in the present paper.

In addition to the satellites, eight reference stars, whose positions were taken from the Astronomische Gesellschaft Catalogue (Berlin B. Zone), were measured on each photograph and the constants determined in the usual manner. Right ascensions and declinations of the satellites were then determined, and by comparison with the tabular place of Jupiter, position angles and distances deduced.

Observations of Satellite VI.

Date and G.M.T. 1906.				Apparent R.A.			Apparent Dec.			Position Angle.	Distance.	Exp.
	d	h	m	s	h	m	s	°	′	″	°	″	m
Aug.	28	15	23	29	6	22	42·60	+22	37	48·1	208·053	1712·8	28
	31	15	24	32	6	24	58·69	+22	36	25·1	203·733	1672·8	45
Sept.	25	13	43	0	6	40	52·04	+22	26	21·9	158·992	1662·5	40
	25	14	28	50	6	40	53·01	+22	26	21·4	158·935	1662·5	40
	26	14	16	1	6	41	23·20	+22	26	5·7	157·130	1678·1	41
Oct.	13	14	2	11	6	48	14·10	+22	24	21·6	129·782	2137·5	54
	16	13	44	50	6	49	3·42	+22	24	45·1	125·897	2245·7	20
	16	14	35	51	6	49	3·74	+22	24	44·9	125·910	2244·9	53
	19	16	28	9	6	49	46·76	+22	25	23·0	122·183	2363·6	30